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Stacey Muir* (muirs2@scranton.edu), University of Scranton, Mathematics Department,
Scranton, PA 18510. *Convolutions of Complex-Valued Harmonic Mappings*. Preliminary report.

We will discuss the mapping properties of the convolution of complex-valued harmonic mappings defined on the open unit disk $\mathbb{D} \subset \mathbb{C}$. Unlike in the analytic case, it is known that the convolution of two harmonic mappings with a convex image does not necessarily result in a mapping with a convex image. We will present some conditions that assure local univalence of a harmonic convolution and provide a number of examples where the convolution has a convex image. (Received September 22, 2011)